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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,388	03/12/2004	Igor Seleznev	0492611-0545/MIT9277CON2	7295

24280 7590 06/14/2007

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EXAMINER	
WARTALOWICZ, PAUL A	
ART UNIT	**PAPER NUMBER**
1754	

MAIL DATE	DELIVERY MODE
06/14/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/799,388	SELEZNEV ET AL.	
	Examiner	Art Unit	
	Paul A. Wartalowicz	1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *40-62* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *40-62* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 3/27/07 have been fully considered but they are not persuasive.

Applicant argues that the pending claim 40 recites "providing a metal oxyflouride film on a substrate" and that in contrast, the subject matter of the lost count merely recites forming a pre-curser film comprising barium, fluorine, yttrium and copper. Applicant goes on to argue that there is no recitation of oxygen that would be necessary for an oxyfluoride film.

However, the subject matter of the lost count sets forth heat-treating said precursor film (comprising barium, fluorine, yttrium, and copper) at a temperature above about 700°C in the presence of oxygen. One of ordinary skill in the art would recognize heat-treating would begin at room temperature and then rise to a temperature of above 700°C. As the temperature is increased to above 700°C, the precursor with oxygen present will be processed at a temperature of 400°C that will inherently form an oxyfluoride film which wherein the temperature is subsequently raised to a temperature of above 700°C in order to convert the oxyfluoride precursor to the superconducting material. It is stated in the specification that this is believed to be the mechanism that occurs during treatment of the precursor with oxygen at elevated temperatures (2005/0014652 (paragraph 0036) and 2004/0171494 (paragraph 0035)). Therefore, the specification supports the assertion that the oxyfluoride precursor film is formed in the

process of the subject matter of the lost count. It appears that applicant's argument is focused on the recitation of forming a precursor film comprising barium, fluorine, yttrium, and copper. However, as discussed above, it is maintained that the oxyfluoride precursor is inherently formed by the process conditions.

Additionally, it appears applicant's argument is drawn to what may or may not be "included" in the subject matter. However, the rejection is based upon the instant claims not being patentably distinct over the subject matter of the lost count.

Applicant argues that pending claim 40 recites that the oxyfluoride film includes the constituent metallic elements of an oxide superconductor in substantially stoichiometric proportions and that the subject matter of the lost count does not include the requirement that the barium, fluorine, yttrium, and copper be in substantially stoichiometric proportions of a resulting oxide superconductor.

However, the subject matter of the lost count recites forming a film of crystalline $YBa_2Cu_3O_7$. The subject matter expressly states the ratio of the elements present in the superconducting material. One of ordinary skill in the art would recognize that it would have been obvious to one of ordinary skill in the art to provide the elements in substantially stoichiometric amounts to produce the compound as claimed.

Additionally, it appears applicant's argument is drawn to what may or may not be "included" in the subject matter. However, the rejection is based upon the instant claims not being patentably distinct over the subject matter of the lost count.

Applicant argues that the subject matter of the lost count does not include forming a precursor oxyfluoride film on a substrate, it cannot encompass converting a metal oxyfluoride into the oxide superconductor.

However, this argument appears to be based on the argument that the subject matter of the lost does not include forming a precursor oxyfluoride film on the substrate. As discussed above; as the temperature is increased to above 700°C, the precursor with oxygen will be processed at a temperature of 400°C that will inherently form an oxyfluoride film which wherein the temperature is subsequently raised to a temperature of above 700°C in order to convert the oxyfluoride precursor to the superconducting material. It is stated in the specification that this is believed to be the mechanism that occurs during treatment of the precursor with oxygen at elevated temperatures (2005/0014652 (paragraph 0036) and 2004/0171494 (paragraph 0035)). Therefore, the subject matter of the lost count inherently teaches converting a metal fluoride oxide precursor into an oxide superconductor.

Additionally, it appears applicant's argument is drawn to what may or may not be "included" in the subject matter. However, the rejection is based upon the instant claims not being patentably distinct over the subject matter of the lost count.

Applicant argues that independent claim 40 recites converting the metal oxyfluoride into the oxide superconductor under conditions that enable the removal of HF from the film surface and that the subject matter of the lost count does not include processing under conditions that enable the removal of HF from the film surface.

However, it is well known in the art to remove HF from the surface as recognized throughout the specification of the lost count. Specifically, HF is evolved through the process of heating at the temperature (700°C) in the atmosphere (presence of oxygen and water) set forth in the lost count. As HF is produced inherently in the subject matter of the lost count, one of ordinary skill in the art would recognize that the HF must be removed in order to produce high quality YBCO (paragraph 0055, 2005/0014652). Additionally, reduced HF content within the oxyfluoride film may favor c-axis texturing (paragraph 0058, 2005/0014652). Because the invention is directed to forming a crystalline YBCO at a low pressure, one of ordinary skill would recognize that it would at least be obvious to remove HF from the substrate in order to provide a high quality YBCO with the desired orientation. Additionally, the specification indicates that there are a number of ways to remove HF from the substrate surface including lowering the ambient pressure in the furnace. The subject matter of the lost count recites "heat-treating said precursor film at a temperature above 700°C in the presence of oxygen and water vapor at a **sub-atmospheric pressure** to form a crystalline structure" (emphasis added). Therefore, it is also maintained that HF is inherently removed at the conditions required by the subject matter of the lost count (presence of oxygen and water vapor, reduced pressure, 700°C).

Additionally, it appears applicant's argument is drawn to what may or may not be "included" in the subject matter. However, the rejection is based upon the instant claims not being patentably distinct over the subject matter of the lost count.

Applicant argues that pending claim 40 is directed to a method of producing an oriented oxide superconducting film and that the subject matter of the lost count is not directed to producing an oriented oxide superconducting film.

However, the subject matter of the lost count would inherently form an oriented oxide superconducting film. Some evidence of this is the recitation in the specification that the processes of the invention result in rapid conversion of precursor films to superconductors exhibiting primarily c-axis texturing (paragraph 0029 in 2004/0171494; paragraph 0030 in 2005/0014652).

The subject matter of the lost count is drawn to the process described in the specification and would therefore inherently teach an oriented film whether or not it is expressly claimed. As described above, the process of the subject matter of the lost count appears to be substantially similar to that of instant claim 40 as discussed above Therefore, one of ordinary skill in the art would recognize that a substantially similar product is produced by the process of the subject matter of the lost count as by the process of instant claim 40. Because the products of the processes are substantially similar, one of ordinary skill would recognize that the properties of the products produced by the substantially similar processes would be substantially similar, including the presence of orientation.

Additionally, it appears applicant's argument is drawn to what may or may not be "included" in the subject matter. However, the rejection is based upon the instant claims not being patentably distinct over the subject matter of the lost count.

In summary, applicant appears to set forth the argument based upon a discrepancy of words and phrases not "included" in the subject matter of the lost count, not what is inherently occurring or would be obvious to one of ordinary skill in the art to occur in the process of the subject matter of the lost count. The applicant is not arguing that the subject matter of independent claim 40 of the currently claimed invention is patentably distinct from the subject matter of the lost count.

Applicant further argues that the subject matter of the lost count is generic to pending independent claim 40 in that many limitations of the lost count are broader than limitations in claim 40. However, applicant has failed to demonstrate how independent claim 40 is patentably distinct from the subject matter of the lost count.

As set forth in the rejection of record, a losing party is barred on the merits from seeking a claim that would have been anticipated or rendered obvious by the subject matter of the lost count. *In re Deckler.* This rejection incorporates the principles of res judicata and collateral estoppel as independent claim 40 is rejected as not patentably distinct from the subject matter of the lost count.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (g)(1) during the course of an interference conducted under section 135 or section 291, another inventor involved therein establishes, to the extent permitted in section 104, that before such person's invention thereof the invention was made by such other inventor and not abandoned, suppressed, or concealed, or (2) before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it. In determining priority of invention under this subsection, there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

Claims 40-62 are rejected under 35 U.S.C. 102(g) over the sole lost count of Patent Interference No. 105,406.

Claims 40-62 correspond to the subject matter of the sole count of Patent Interference No. 105,406, as to which a judgement adverse to the applicant has been rendered. A losing party is barred on the merits from seeking a claim that would have been anticipated or rendered obvious by the subject matter of the lost count. *In re Deckler*, 977 F.2d 1449, 24 USPQ2d 1448 (Fed. Cir. 1992); *Ex parte Tytgat*, 225 USPQ 907 (Bd. Pat. App. & Inter. 1985). See also MPEP §2308.03.

In this instance, because claims 40-62 are not patentably distinct from the subject matter of the sole count, the claims stand rejected as estopped on the merits by the applicant's loss in the interference. The subject matter of claims 40-62 is generic to the subject matter of the lost count. As per Example 2 in MPEP §2308.03, since the generic claim encompasses subject matter lost in the interference, the generic claim must be rejected as estopped on the merits by the loss in the interference.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. Wartalowicz whose telephone number is (571) 272-5957. The examiner can normally be reached on 8:30-6 M-Th and 8:30-5 on Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Paul Wartalowicz
June 7, 2007

Steven Bos
Primary Examiner
A.U. 1754